

Underwater Probes

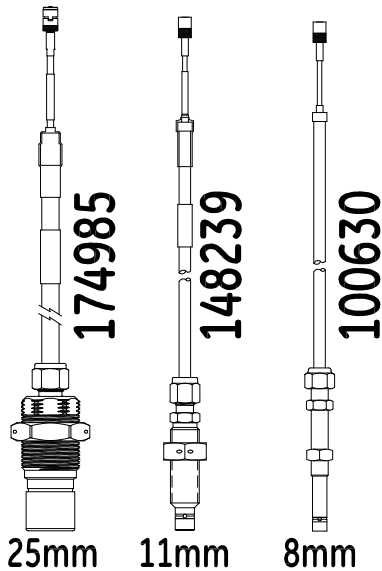
Bently Nevada™ Asset Condition Monitoring

Description

3300 XL underwater probes are designed specifically for applications involving constant exposure to liquids, such as those in hydroelectric plants or sewage treatment facilities. These designs also seal the probes against gases. All our underwater probes are rated to 500 psi (34 Bar). Contact a sales representative for applications that require higher pressure ratings.

All of the underwater probes are compatible with standard 3300 XL Proximator® Sensors and extension cables. Note that these probes each belong to a different family (8mm, 11mm, or 25mm) and consequently require different Proximator Sensors and extension cables. Refer to the standard data product sheets to obtain ordering information for the 8mm, 11mm, and 25mm transducer systems.

The 100630, 148239, and 174985 probes were developed for applications in which the entire probe is submerged or exposed to fluids. Tubing attached to the probe case protects the probe cable, but the connector end of the probe is not sealed against liquids and must not be submerged. In addition, the probe case is made of 304 Stainless Steel and is not suitable for salt-water applications. Contact a sales representative if you have an application involving salt water.



imagination at work

Specifications and Ordering Information
Part Number 175852-01
Rev. A (05/07)

Specifications

Electrical & Mechanical

The electrical & mechanical specifications for each of these probes is the same as standard product for the 8mm, 11mm, and 25mm systems.

Reference data sheets as follows for complete specifications

Probe 100630:

3300 8mm System data sheet
document ID# 141194-01

Probe 148239:

3300 11mm System data sheet
document ID# 146256-01

Probe 174985:

3300 25mm System data sheet
document ID# 163236

Environmental Limits

Probe Temperature Range

Operating and Storage Temperature:

-51 °C to +177 °C (-60 °F to +351 °F)

Probe Pressure:

Rated to seal 34 Bar (500 psi) Nitrogen. Modifications are available for applications involving higher pressures. Contact a Sales Representative if your application requires a test of the pressure seal.

Note: It is the responsibility of the customer or user to ensure that all liquids and gases are contained and safely controlled should leakage occur from a proximity probe. Bently Nevada, LLC will not be held responsible for any damages resulting from leaking proximity probes.

Hazardous Area Approvals

CSA/NRTL/C

Ex ia IIC

Class I, Div. 1

Groups A, B, C & D

T5 @ Ta = -51°C to +40°C

Per drawings 141092, 140979, CA22000

Ex nA IIC

Class I, Div. 2

Groups A, B, C & D

T5 @ Ta = -51°C to +40°C

Per drawings 141092, 140979, CA22000

ATEX

 II G

EEx ia IIC

T1...T5 @ T_a as follows

Temperature Class	Ambient Temperature
T1	-51°C to +232°C
T2	-51°C to +177°C
T3	-51°C to +120°C
T4	-51°C to +80°C
T5	-51°C to +40°C

When installed per drawing #142491.

Certification Number

BAS99ATEX1099/X

Ex II 3 G

EEx nA II

T1...T5 @ T_a as follows

Temperature Class	Ambient Temperature
T1	-51°C to +232°C
T2	-51°C to +177°C
T3	-51°C to +120°C
T4	-51°C to +80°C
T5	-51°C to +40°C

When installed per drawing #142491.

Certification Number

BAS99ATEX3098/X

IEC

Ex ia IIC T4

The unit has the following electrical parameters:

U_i = -28V C_i = 1.5nF

I_i = 140mA L_i = 200µH

P_i = 0.84W

Certification Number

IECEX BAS 04.0056

Ex nA II

The unit has the following electrical parameters:

U_i = -28V

Certification Number

IECEX BAS 04.0058X

Ordering Information

3300 XL 8mm Underwater Proximity Probe:

100630 3300 XL 8mm Underwater Probe, 3/8-24 UNF thread, sealed case with Tefzel® Tubing

Part Number-AXX-BXX-CXX-DXX

A: Unthreaded Length Option

Note: Unthreaded length must be at least 0.7 inches less than the case length.

Order in increments of 0.1 in
Length configurations:

Maximum unthreaded length: 8.9 in

Minimum unthreaded length: 0.0 in

Example: 0 4 = 0.4 in

B: Overall Case Length Option

Order in increments of 0.1 in
Threaded length configurations:

Maximum case length: 9.6 in

Minimum case length: 0.8 in

Example: 2 4 = 2.4 in

C: Total Length Option

05 0.5 metre (1.6 feet)

10 1.0 metre (3.3 feet)

15 1.5 metre (4.9 feet)

20 2.0 metres (6.6 feet)

50 5.0 metres (16.4 feet)¹

90 9.0 metres (29.5 feet)

D: Connector and Cable-Type Option

01 Miniature coaxial ClickLoc™ connector with connector protector, standard cable

02 Miniature coaxial ClickLoc connector, standard cable

3300 XL 11mm Underwater Proximity Probe:

148239 3300 XL 11mm Underwater Probe, 5/8-18 UNF thread, sealed case with Tefzel® Tubing

Part Number-AXX-BXX-CXX-DXX

A: Unthreaded Length Option

Note: Unthreaded length must be at least 1.0 inches less than the case length.

Order in increments of 0.1 in
Length configurations:

Maximum unthreaded length: 11.0 in

Minimum unthreaded length: 0.0 in

Example: 0 4 = 0.4 in

B: Overall Case Length Option

Order in increments of 0.1 in
Threaded length configurations:

Maximum case length: 12.0 in

Minimum case length: 1.8 in

Specifications and Ordering Information

Part Number 175852-01

Rev. A (05/07)

- Example: 2 4 = 2.4 in**
- C: Total Length Option
- | | |
|------------|-------------------------------------|
| 1 0 | 1.0 metre (3.3 feet) |
| 5 0 | 5.0 metres (16.4 feet) ¹ |
| 9 0 | 9.0 metres (29.5 feet) |

03839410

- D: Connector and Cable-Type Option
- | | |
|------------|---|
| 0 1 | Miniature coaxial ClickLoc connector with connector protector, standard cable |
| 0 2 | Miniature coaxial ClickLoc connector, standard cable |

3300 XL 25mm Underwater Proximity Probe

03800001

174985 3300 XL 25mm Underwater Probe, 1.25-12 UNF thread, sealed case with Tefzel[®] Tubing

- A: Unthreaded Length Option
-
- Note:** Unthreaded length must be at least 1.0 inches less than the case length.

Order in increments of 0.1 in
Length configurations:
Maximum unthreaded length: 8.9 in
Minimum unthreaded length: 0.0 in
Example: 0 4 = 0.4 in

- B: Overall Case Length Option
- Order in increments of 0.1 in
Threaded length configurations:
Maximum case length: 9.9 in
Minimum case length: 1.2 in
Example: 2 4 = 2.4 in

04301007

- C: Total Length Option
- | | |
|------------|-------------------------------------|
| 1 0 | 1.0 metre (3.3 feet) |
| 5 0 | 5.0 metres (16.4 feet) ¹ |
| 9 0 | 9.0 metres (29.5 feet) |

Accessories

173873

40113-02

Connector Protector Kit.
Connector Protector Kit for probes and extension cables, including installation tools. The 03800001 connector protector must be ordered separately.

136536-01

Connector Protector Adapter.
Allows connector protector

installation tools manufactured prior to 1998 to be used with 75 Ω ClickLoc connectors.

75 ohm Triaxial Male Connector Protector. Male connector protectors are installed onto the extension cable and attach to the female connector protector on the probe, providing environmental protection of connectors.

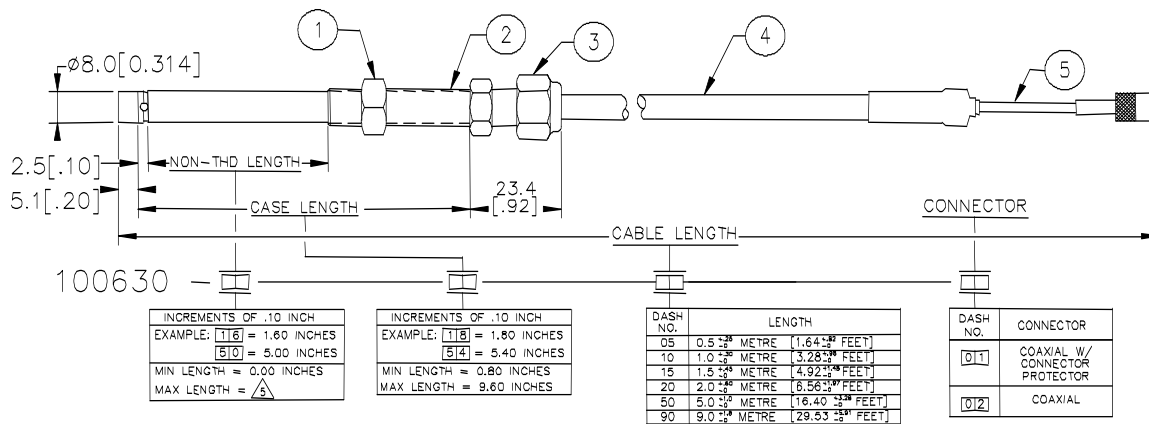
75 ohm Coaxial Female Connector Protector. Female connector protectors are installed onto the probe lead and attach to the male connector protector on the extension cable, providing environmental protection of connectors. Also placed on the extension cable to slide over the connection to the Proximity Sensor and protect it from the environment.

3/8-24 Probe Lock Nut with safety wire holes. Single probe lock nut with two holes drilled through the nut to allow safety wire to secure the lock nut in place.

High Temperature Cable Ties

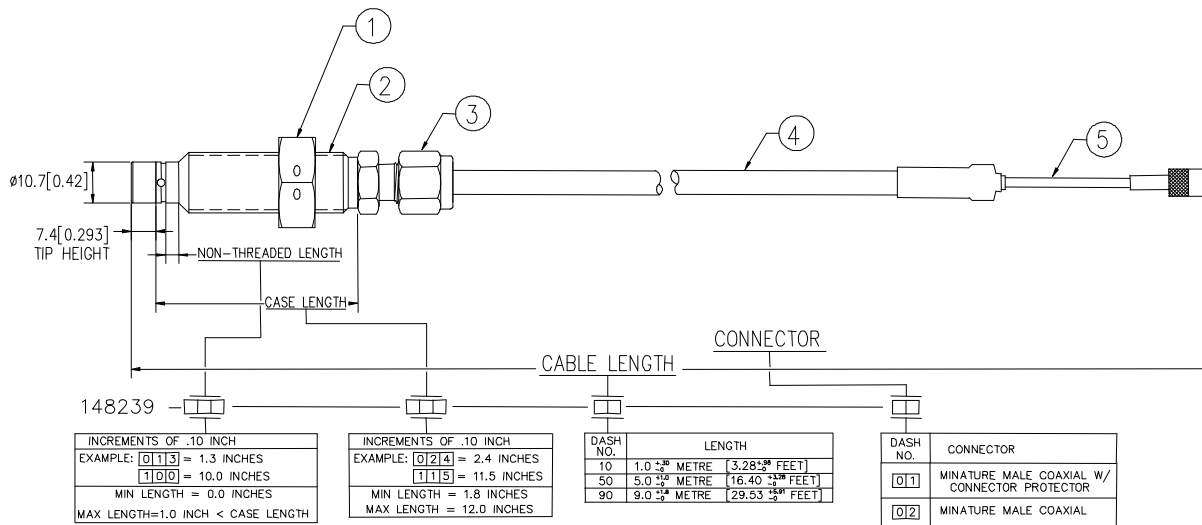
The 173873 high temperature cable tie is an economical alternative to metal brackets in high temperature applications. These cable ties are molded from PEEK polymer for multiple uses in extreme environments up to 180°C (356°F). 7-inch length, bag of 50.

Dimensional Drawings



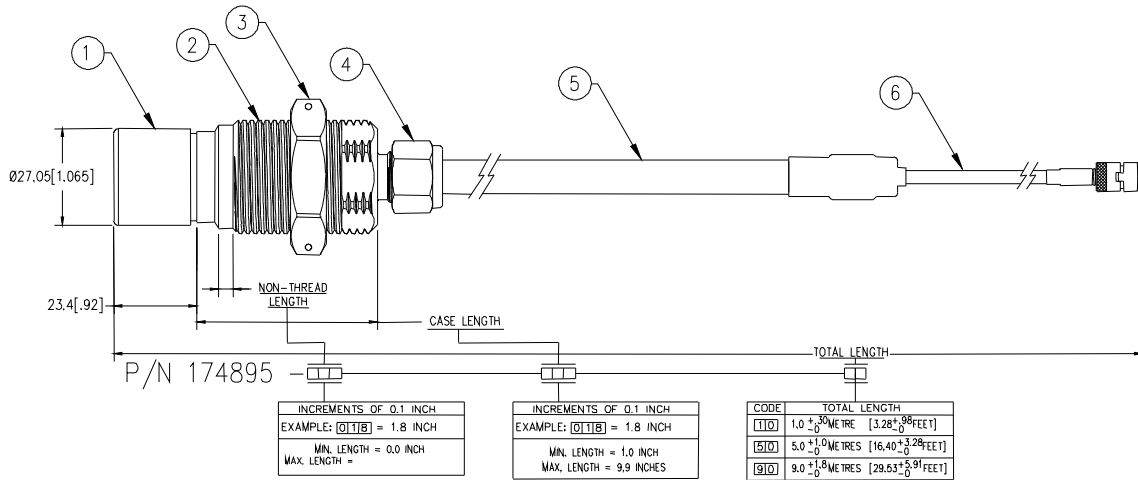
1. Jam nut 9/16 inch wrench flats
2. Probe threads, 3/8-24 UNF 2A
3. Swagelok[™] fitting, used to secure tubing to probe case. Do not loosen this fitting.
4. Tefzel[®] tubing 0.25 inch outside diameter
5. Coaxial cable 0.145 inch maximum diameter

Figure 1 - Probe 100630, 3300 XL 8mm 3/8-24 thread forward mount.



1. Jam nut, 15/16 inch hex with safety wire holes
2. 5/8-18 UNF 2A Mounting threads
3. Swagelok fitting, used to secure tubing to probe case. Do not loosen this fitting.
4. Tefzel[®] tubing 0.25 inch outside diameter
5. Coaxial cable 0.145 inch maximum diameter

Figure 2 - Probe 148239, 3300 XL 11mm 5/8-18 thread forward mount



1. PEEK polymer tip
2. 1.25-12 mounting threads with 1.125 inch integral wrench flats
3. Jam nut, 1.5 inch hex with safety wire holes
4. Swageloktm fitting , used to secure tubing to probe case. Do not loosen this fitting.
5. Tefzel[®] tubing 0.375 inch outside diameter
6. Coaxial cable 0.145 inch maximum diameter

Figure 3 - Probe 174895, 1.25 - 12 thread, forward mount with Tefzel[®] tubing protecting probe cable.

Notes:

All dimensions on figures are in millimetres [inches] unless otherwise noted.

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 Tefzel[®] is a registered trademark of E.I. DuPont Company
 Swageloktm is a trademark of Parker Hannifin Co.

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